

PATENT

Docket No. 11848/6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Rory Albert James PYNENBURG
Serial No. : (Natl. Phase of PCT/AU01/00838)
Filed : 06 March 2002
For : LAMINATE PACKAGE FOR AN ENERGY STORAGE DEVICE
Art Unit : Unassigned
Examiner : Unassigned
ASSISTANT COMMISSIONER
FOR PATENTS
Washington, D.C. 20231

PRELIMINARY AMENDMENT

SIR:

Prior to examining the above-identified national phase patent application, please amend the application as follows.

In the Claims:

Please cancel claims 1-41 and add new claims 42-58, as follows:

42. A laminate package for an energy storage device having two terminals, the package including:

an inner barrier layer for defining a cavity to contain the energy storage device, the inner barrier layer having two opposed portions that are sealingly engaged with each other and from between which the terminals extend from the cavity;

a sealant layer being disposed intermediate the inner barrier layer and the terminals; and
an outer barrier layer bonded to the inner barrier layer and having a metal layer.

43. A package according to claim 42 wherein the sealant layer is Nucrel™ resin containing between about 5% and 10% ethylene acrylic acid.

44. A package according to claim 43 wherein the sealant layer contains about 6% to 9% of ethylene acrylic acid.

45. A package according to claim 42 wherein the sealant layer contains one of: one or more maleic anhydrides; maleic acid; one or more anhydride grafted polyolefins; and one or more acid modified polyolefins.

46. A package according to claim 42 wherein the outer barrier layer and the inner barrier layer include a first melting point and a second melting point respectively, where the first melting point is higher than the second melting point.

47. A package according to claim 46 wherein the sealant layer includes a third melting point, where the second melting point is greater than or equal to the third melting point.

48. A package according to claim 42 wherein the inner barrier layer and the sealant layer include a second melting point and a third melting point respectively, wherein the second melting point is greater than or equal to the third melting point.

49. A laminate package for an energy storage device having two terminals, the package including:

an inner barrier layer for defining a cavity to contain the energy storage device;

a sealant layer being disposed between, and being sealingly engaged with, the inner barrier layer and the terminals; and

an outer barrier layer bonded to the inner barrier layer and having a metal layer, wherein the package sealingly contains the energy storage device and the terminals are accessible from outside the package for allowing external electrical connection to the energy storage device.

50. A package according to claim 49 wherein the outer barrier layer and the inner barrier layer include a first melting point and a second melting point respectively, where the first melting point is higher than the second melting point.

51. A package according to claim 50 wherein the sealant layer includes a third melting point, where the second melting point is greater than or equal to the third melting point.

52. A package according to claim 49 wherein the inner barrier layer and the sealant layer include a second melting point and a third melting point respectively, wherein the second melting point is greater than or equal to the third melting point.

53. A laminate package for an energy storage device having two terminals, the package including:

- an inner barrier layer for defining a cavity to contain the energy storage device, the inner barrier layer having a first melting point;

- a sealant layer being disposed between, and being sealing engaged with, the inner barrier layer and the terminals, the sealant layer having a second melting point that is less than the first melting point; and

- an outer barrier layer bonded to the inner barrier layer and having a metal layer, wherein the outer barrier layer having a third melting point that is greater than the first melting point.

54. A laminate package for an energy storage device having two terminals, the package including:

- an inner barrier layer for defining a cavity to contain the energy storage device, the inner barrier layer having a first melting point;

- a sealant layer being disposed between, and being sealing engaged with, the inner barrier layer and the terminals, the sealant layer having a second melting point that is less than the first melting point; and

- an outer barrier layer bonded to the inner barrier layer and having a metal layer, wherein the outer barrier layer having a third melting point that is greater than the first melting point.

55. A package according to claim 54 wherein the sealing engagement between the sealing layer and both the terminals and the inner barrier layer is affected by thermal means.

56. A package according to claim 55 wherein the thermal means applies thermal energy to the package to soften the sealant layer preferentially to the inner barrier layer.

57. A package according to claim 56 wherein the application of the thermal energy softens the inner barrier layer preferentially to the outer barrier layer.

58. A package according to claim 54 wherein the sealing engagement is also affected by the combination of the thermal energy and compressive forces being applied to the layers.

REMARKS

Claims 1-41 have been canceled and new claims 42-58 were added. No new matter has been introduced.

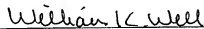
Examination in light of these amendments is respectfully requested.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. §1.16 or §1.17 to Deposit Account No. 11-0600. The Examiner is invited to contact the undersigned at 202-220-4247 to discuss any matter regarding this application.

Respectfully submitted,

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Dated: 06 March 2002


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